

## Native Diaphorase (NADPH) from Bacillus megaterium

Cat. No. NATE-1154

Lot. No. (See product label)

### Introduction

#### Description

In enzymology, a NADPH dehydrogenase (EC 1.6.99.1) is an enzyme that catalyzes the chemical reaction:  $\text{NADPH} + \text{H}^+ + \text{acceptor} \rightleftharpoons \text{NADP}^+ + \text{reduced acceptor}$ . The 3 substrates of this enzyme are NADPH,  $\text{H}^+$ , and acceptor, whereas its two products are  $\text{NADP}^+$  and reduced acceptor. This enzyme belongs to the family of oxidoreductases, specifically those acting on NADH or NADPH with other acceptors.

#### Applications

Useful for enzymatic determination of reduced NADP.

#### Synonyms

NADPH:acceptor oxidoreductase; NADPH2 diaphorase; NADPH diaphorase; OYE; diaphorase; dihydronicotinamide adenine dinucleotide phosphate dehydrogenase; NADPH-dehydrogenase; NADPH-diaphorase; NADPH2-dehydrogenase; old yellow enzyme; reduced nicotinamide adenine dinucleotide phosphate dehydrogenase; TPNH dehydrogenase; TPNH-diaphorase; triphosphopyridine diaphorase; triphosphopyridine nucleotide diaphorase; NADPH2 dehydrogenase; NADPH: (acceptor) oxidoreductase; NADPH dehydrogenase; EC 1.6.99.1

### Product Information

#### Source

Bacillus megaterium

#### Appearance

Yellowish amorphous powder, lyophilized

#### Form

Freeze dried powder

#### EC Number

EC 1.6.99.1

#### CAS No.

9001-68-7

#### Molecular Weight

48 kDa (gel filtration)

#### Activity

More than 5 U/mg solid

#### Contaminants

Myokinase < 0.50%

#### Isoelectric point

3

#### pH Stability

6.5–9.0

#### Optimum pH

7.0–9.0

#### Thermal stability

Stable at 60°C and below

#### Michaelis Constant

NADPH  $2.9 \times 10^{-4}\text{M}$

#### Activators

FMN, FAD

#### Unit Definition

One unit is defined as the amount of enzyme which oxidizes 1  $\mu\text{mole}$  of NADPH to  $\text{NADP}^+$  per minute at 30°C under the conditions specified in the assay procedure.

### Storage and Shipping Information

#### Storage

At least one year at -20°C

